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10/699,356	10/31/2003	Robert B. Thompson JR.	12492.0148	2529

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EXAMINER
RADTKE, MARK A

ART UNIT	PAPER NUMBER
2165	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/699,356	THOMPSON, ROBERT B.
	Examiner	Art Unit	
	Mark A. X Radtke	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>14 December 2006</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-31</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-31</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Remarks

1.   In response to communications filed on 14 December 2006, claim(s) 1-5, 7-21,

24-27 and 30-31 is/are amended per Applicant's request. Therefore, claims 1-31 are

presently pending in the application, of which, claim(s) 1, 14, 16, 18, 27 and 31 is/are

presented in independent form.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-9, 11-20, 22-23 and 25-30 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Balakrishnan (U.S. Pat. No. 7,035,240) in view of Taylor (U.S.

Pat. No. 6,785,730).

As to claim 1, Balakrishnan et al. teaches a data transforming system (see

Abstract), comprising:

a plurality of receive interfaces configured to receive data (see column 5, lines 61-63, where "receive interface" is read on "cluster-head"); and

a transmit interface configured to send data to the target system (see figure 6, step 640 and see column 6, lines 39-40, where "target system" is read on "base station"); wherein the modified data includes a first portion of data from a first receive interface and a second portion of data from a second receive interface, and is configured according to a predetermined format of the target system (see column 15, lines 32-36).

Balakrishnan et al. does not explicitly teach a transformation module configured to transform the format of the received data into modified data having a different format that is recognizable by a target system, which cannot recognize the format of the received data.

Taylor teaches a transformation module configured to transform the format of the received data into modified data having a different format that is recognizable by a target system, which cannot recognize the format of the received data (see Abstract).

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to have modified Balakrishnan et al. by the teaching of Taylor because "sharing data between these [non-homogenous] devices is often impossible" (see Taylor, column 1, lines 37-38) and in the invention of Balakrishnan et al. nodes "need not be" homogenous (see Balakrishnan et al., column 6, lines 10-12).

As to claims 2, 15 and 17, <u>Balakrishnan et al.</u>, as modified, teaches wherein the

transformation module is configured to preprocess the received data and to provide

optimized data to the target system, the optimized data comprising the first portion and

second portions of data, wherein each of the first and second portions of data

represents an automated selection of optimal data from corresponding portions of

received data from the first and second receive interfaces (see column 15, lines 37-40).

As to claim 3, <u>Balakrishnan et al.</u>, as modified, teaches wherein the first portion

of data is received from a local source (See column 13, lines 18-20. Local sources

communicate directly with the base station).

As to claims 4 and 20, <u>Balakrishnan et al.</u>, as modified, teaches wherein the

second portion of data is received from a remote source (See column 6, lines 39-40.

Non-cluster heads communicate by way of cluster heads, so they are remote).

As to claim 5, <u>Balakrishnan et al.</u>, as modified, teaches wherein the first and the

second portion of data are received from a local source and a remote source,

respectively (see Examiner's comments regarding claims 3 and 4. When cluster heads

are used, they are local sources and non-cluster-heads are remote sources).

As to claims 6 and 22, <u>Balakrishnan et al.</u>, as modified, teaches configured to

execute the transformation to generate emulated data recognizable by the target

system (See column 15, lines 32-36. Data outliers are smoothed out by the clustering

and data aggregation process. If this were not done, the base station would misinterpret

spurious data. Aggregation ensures that only useful, or recognizable, data is presented

to the user).

As to claim 7, Balakrishnan et al., as modified, teaches the transformation

module comprising:

at least one receive interface to receive the first and second received data (see

figure 2, RF 129);

a logic module to process the first and second receive data (see figure 2,

Processor 128); and

at least one transmit interface to transmit optimized data (see figure 2, RF 129).

As to claims 8 and 29, Balakrishnan et al., as modified, teaches further

comprising a third interface configured to send data to a plurality of other data

transforming systems (See figure 1, elements 112a-c. Each cluster is a data

transforming system).

As to claims 9 and 23, Balakrishnan et al., as modified, teaches wherein the

target system is a combat system (see column 1, lines 58-60, where "combat" is read

on "military").

As to claims 11 and 25, <u>Balakrishnan et al.</u>, as modified, teaches further comprising an override module configured to provide operator-selected data in place of at least one track of the automated selection of optimal data (see column 4, lines 28-30, where "operator-selection" is read on "manually").

As to claims 12 and 26, <u>Balakrishnan et al.</u>, as modified, teaches further comprising logic configured to provide the first received data to the target system through bypass logic of the data transforming system (see column 4, lines 32-26, where "bypass" is read on "combined ... contains the relevant information of all the individual signals").

As to claim 13, <u>Balakrishnan et al.</u>, as modified, teaches wherein said data transforming system is a banking system (see column 1, lines 58-60, "civil ... applications").

As to claim 14, <u>Balakrishnan et al.</u> teaches an integrated plurality of data transforming systems and associated target systems, each data transforming system comprising (see Abstract and column 1, lines 58-60, "military applications"):

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claim 16, <u>Balakrishnan et al.</u> teaches an integrated plurality of data transforming systems and associated target systems, each data transforming system comprising (see Abstract and column 1, lines 58-60, "military applications"):

wherein additional computer systems are integrated into the integrated plurality of data transforming systems (See column 1, lines 60-62. Each type of sensor is an additional computer system).

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claim 18, <u>Balakrishnan et al.</u> teaches a method of generating and transmitting data derived from a first set of received local data and a second set of received remote data, comprising:

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claim 19, <u>Balakrishnan et al.</u>, as modified, teaches wherein the signals comprise records (see column 4, lines 9-14, where "records" are read on "data").

As to claim 27, <u>Balakrishnan et al.</u> teaches a system for integrating a plurality of computer-based systems, comprising (see Abstract):

For the remaining steps of this claim applicant(s) is/are directed to the remarks and discussions made in claim 1 above.

As to claim 28, <u>Balakrishnan et al.</u>, as modified, teaches wherein the means for receiving data are interfaces to sensors and networks (see Abstract and figure 2).

As to claim 30, <u>Balakrishnan et al.</u>, as modified, teaches wherein the means for sending data are channels to a computer-based target system (see Abstract and see figure 1A, base station 102 and see figure 2, RF 129 and see column 1, lines 58-60, "military applications").

4.   Claims 10 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Balakrishnan et al.</u> as applied to claims 1 and 18 above.

As to claims 10 and 24, <u>Balakrishnan et al.</u>, as modified, still does not explicitly teach wherein the received data includes at least one track file.

However, these differences are only found in the nonfunctional descriptive material and are not functionally involved in the steps recited. The determination of valid data would be performed the same regardless of the specific application (in this case, target tracking). Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, (see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994)).

Therefore, it would have been obvious to a person of ordinary skill in the relevant art at the time the invention was made to aggregate data based on any type of application (see Balakrishnan et al., column 15, lines 29-23, "Therefore, each cluster-head can preferably utilize automated methods of combining or aggregating the data into a small set of meaningful information using techniques known in the art." See Application, page 9, lines 12-14, "It may determine the most valid tracks or create additional tracks by any method including standard methods known in the art[...]"), because such data does not functionally relate to the steps in the method claimed and because the subjective interpretation of data does not patentably distinguish the claimed invention.

5.   Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Balakrishnan et al. as applied to claim 18 above, and further in view of Mulgund et al. (U.S. Patent 6,816,862).

As to claim 21, Balakrishnan et al., as modified, still does not explicitly teach wherein the signals comprise real-time signals.

Mulgund et al. teaches wherein the signals comprise real-time signals (see column 1, lines 50-57).

Therefore, it would have been obvious to one of ordinary skill in the relevant art at the time the invention was made to have modified Balakrishnan et al., as modified, by the teaching of Mulgund et al. because "each cluster-head can preferably utilize

automated methods of combining or aggregating the data into a small set of meaningful

information using techniques known in the art" (see Balakrishnan et al., column 15, lines

29-23).

6.   Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Balakrishnan et al. in view of Taylor and further in view of Close (U.S. Patent

3,064,250).

        As to claim 31, Balakrishnan et al. teaches a method for integrating platforms

(see Abstract) including:

        implementing a common network interface on a plurality of combat systems (see

column 1, lines 58-60), the network interface configured to:

        For the remaining steps of this claim applicant(s) is/are directed to the remarks

and discussions made in claim 16 above.

        Balakrishnan et al. does not explicitly teach wherein the platforms are naval and

maritime combat platforms and where the data consists of track data.

        Close teaches wherein the platforms are naval and maritime combat platforms

and where the data consists of track data (see column 1, lines 9-14).

        Therefore, it would have been obvious to one of ordinary skill in the relevant art

at the time the invention was made to have modified Balakrishnan et al. by the teaching

of Close because "wireless distributed microsensor networks are used to monitor [...]

military applications" and "various types of sensors 126 [...] could be interfaced to the

microprocessor" (Emphasis in original. See <u>Balakrishnan et al.</u>, column 1, lines 58-62 and column 8, lines 16-22).

Response to Arguments

7.   Applicant's arguments filed on 14 December 2006 with respect to the rejected claims in view of the cited references have been fully considered but are moot in view of the new grounds for rejection.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9.   Any inquiry concerning this communication or earlier·communications should be directed to the examiner, Mark A. Radtke. The examiner's telephone number is (571) 272-7163, and the examiner can normally be reached between 9 AM and 5 PM, Monday through Friday.

If attempts to contact the examiner are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached at (571) 272-4146.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at (800) 786-9199.

maxr
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19 March 2007

Tm 3/18/07

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER